

Appl. No.: 10/526,341
Amendment dated April 30, 2007
Reply to Office Action of December 28, 2006

AMENDMENTS to the CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A remote monitoring system for exterminating vermin, comprising:

at least one sensor, installed at a plurality of zones of a vermin control subject building, for sensing movement of the vermin in each zone, producing and transmitting sensed signals corresponding to the movement;

at least one remote controller, installed at the vermin control subject building, for receiving and processing the sensed signals to transmit vermin-related information; and

a central control apparatus for receiving the vermin-related information from said at least one remote controller, and processing the vermin-related information for each zone;

wherein at least one remote controller further includes a vermin-related information analyzing module determining grades for each sensor on the basis of population of the sensed vermin, and

the remote controller further includes a vermin control time determining module that determines a vermin control time of zones on the basis of the grade of each sensor, and each zone where said each sensor is installed.

2. (Previously presented) The system of claim 1, further comprising at least one repeater, installed at the vermin control subject building, for receiving the sensed signals and re-transmitting them to said at least one remote controller.

- 3-5. (Canceled)

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6. (Previously presented) The system of claim 1, wherein said at least one sensor comprises at least one out of a first sensor for sensing movement of cockroaches, a second sensor for sensing movement of rats, and a third sensor for sensing movement of flying insects.

7. (Canceled)

8. (Previously presented) The system of claim 1, wherein said at least one sensor is implemented by integrating a heat detector or a movement detector to one selected from a group consisting of an insect luring light, an automatic chemical dispenser, and a luring frame for capturing rodents.

9. (Previously presented) The system of claim 1, wherein said at least one remote controller further comprises:

- a receiving module for receiving the sensed signals from said at least one sensor;
- a sensed information processing module for processing the sensed signals received from the receiving module and collecting vermin-related information; and
- a transmitting module for transmitting the vermin-related information to the central control apparatus.

10. (Previously presented) The system of claim 9, wherein said at least one remote controller further comprises a data input module for receiving information related to an outbreak of the vermin from either or both of a user of the vermin control subject building and a vermin control manager, wherein the information is manually inputted by either or both of the user and the vermin control manager.

11. (Previously presented) The system of claim 9, wherein said at least one remote controller further comprises:

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a transmission time determining module for determining whether to transmit the vermin-related information immediately or not; and

a memory capable of temporally storing the vermin-related information until the transmission of the vermin-related information in case the transmission time determining module determining not to transmit the vermin-related information immediately.

12. (Previously presented) The system of claim 1, wherein the central control apparatus further comprises:

a vermin-related information managing module for storing and updating the vermin-related information received from said at least one remote controller, thereby managing the vermin-related information;

a database for storing the vermin-related information, which is managed by the vermin-related information managing module; and

a communication module for performing wire/wireless communications.

13. (Canceled)

14. (Previously presented) The system of claim 1, wherein said at least one sensor produces the sensed signals in response to sensing of the vermin and the sensed signals are transmitted together with an identification of each sensor.

15. (Canceled)

16. (Previously presented) The system of claim 12, wherein the central control apparatus further comprises a location searching module for searching a location of a mobile communication terminal belonging to a vermin control manager, and a vermin-related information analyzing block for analyzing the vermin-related information,

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wherein the communication module transmits the analysis result of the vermin-related information to the mobile communication terminal searched by the location searching module.

17. (Currently amended) The system of claim 11, wherein ~~said at least one remote controller further comprises:~~

[a] the vermin-related information analyzing module is used for analyzing the vermin-related information received from the sensed information processing module; and
said at least one remote controller further comprises:

a vermin-related information managing module for storing in the memory at least part of the vermin-related information and the analysis result of the vermin-related information analyzed by the vermin-related information analyzing module and updating the stored information, thereby managing the information; and

a terminal connecting module for transmitting the analysis result of the vermin-related information from the memory to a mobile communication terminal, when the mobile communication terminal is connected to the terminal connecting module.

18-19. (Canceled)

20. (Previously presented) The system of claim 11, wherein the transmission time determining module determines to transmit the vermin-related information at a predetermined time when cockroaches and/or flying insects are sensed, and to transmit immediately the vermin-related information when rats are sensed.

21. (Previously presented) The system of claim 1, wherein said at least one sensor and said at least one remote controller periodically check a status including a breakdown and transmit information related to the checked status to the central control apparatus

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22. (Currently amended) A remote monitoring method for exterminating vermin, comprising the steps of:

- sectioning a vermin control subject building into a plurality of zones;
- collecting vermin-related information by sensing active vermin in each of the sectioned zones;
- transmitting the collected vermin-related information to a central control apparatus;
- analyzing the transmitted vermin-related information;
- updating and storing the analyzed vermin-related information by comparing with pre-stored information in a database; and
- determining a vermin control time on the basis of the analyzed vermin-related information;
- searching a location of a vermin control manager; and
- transmitting the analyzed vermin-related information to a mobile communication terminal belonging to the vermin control manager.

23-24. (Canceled)

25. (Previously presented) The method of claim 22, wherein the sectioning step includes sectioning the vermin control subject building into zones on the basis of a function of each zone.

26. (Previously presented) The method of claim 22, wherein the sectioning step includes sectioning the vermin control subject building into zones of minimum unit on which a vermin control work is to be performed.

27. (Canceled)

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28. (Previously presented) The method of claim 26, further comprising the step of assigning a code to each zone of minimum unit,
wherein the step of analyzing the vermin-related information comprises,
arranging the vermin-related information according to the codes assigned to the zones; and
searching a vermin-related information that is out of a predetermined range when compared to the other information arranged for the same code.

29. (Canceled)

30. (Previously presented) The method of claim 22, wherein the vermin-related information is transmitted at a predetermined time when cockroaches or flying insects are sensed, and immediately transmitted when rats are sensed.

31-32. (Canceled)

33. (Previously presented) The method of claim 22, wherein the analyzing of the vermin-related information includes the step of determining population of appearing and captured vermin according to one or more categories including locations in the vermin control subject building, time periods, and the type of vermin.

34. (Canceled)

35. (Previously presented) The method of claim 33, wherein the analyzed vermin-related information is transmitted to the mobile communication terminal together with information of a shortest route from the vermin control manager to the vermin control subject building.

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36-42. (Canceled)